

REMARKS

Claims 1-7, 16-21, and 27-32 have been examined and are all the claims pending in the application. By this Amendment, Applicants cancel claims 27 and 28 without prejudice or disclaimer.

Prior Art Rejections

Claims 1, 3, 27, 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kumada et al. (U.S. Pub. 2002/0008686 A1) ("Kumada").

For at least the following reasons Applicant traverses the rejections.

Independent Claim 1

Claim 1 recites, *inter alia*, a high level of signal passing through at least one signal line is higher than the high level voltage signal supplied by said first power supply and a low level of the signal passing through the signal line is lower than the low level voltage signal supplied by the second voltage supply.

The Examiner admits that such a feature is not disclosed by Kumada. See Office Action page 3. However, the Examiner states that such a feature is an obvious matter of design choice and states that the specification does not disclose any specific advantage or criticality of such a feature. Applicants respectfully disagree with the Examiner because the specification does disclose the advantage of such a signal line at least in paragraph 19. For example, by operating the claimed signal line in the manner recited in claim 1, an on resistance of the transistor can be reduced and a gate length of the transistor can be shortened, which leads to a smaller circuit area. The Examiner also alleges that [0019] of the Applicant's Specification even states that the voltage of the signal passing through can be the same as the voltage supply. Applicants submit that [0019] of the Applicant's specification does not state that a voltage of the signal passing

through can be the same as the voltage supply. Further, the Examiner cannot read limitations from the specification into the claims. See MPEP 2111.01.

Therefore, claim 1 is patentable over Kumada and Applicants respectfully request the Examiner to withdraw the rejection.

Dependent Claim 3

Applicant submits that this claim is allowable at least by virtue of their dependency on the patentable independent claim 1 and by virtue of the features recited therein. Allowance of claim 3 is therefore requested.

Dependent Claim 29

The reference voltage generator circuit 20 shown in FIG.2 of Kumada (US 2002/0008686 A1) shifts the source signals, but does not shift the level of the signals of the common driver. Therefore, the configuration disclosed in Kumada would be different from the present invention. For reference, it is described in the paragraph 0066 of Kumada that "the reference voltages V_i to V_4 , V'_1 to V'_4 can be shifted". Also see Fig.4 of Kumada.

Therefore, claim 29 is patentable over Kumada.

Claims 2, 4-7, 16-21, 28, 30-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kumada in view of Hosokawa et al. (U.S. Patent No: 4,393,380) ("Hosokawa").

Claims 2 and 16

The Examiner admits that Kumada fails to disclose the limitation "wherein the common drive circuit is disposed on a position opposite to the gate driver circuit and the display portion therebetween" recited in claim 16. See Office Action page 5. The Examiner cites Hosokawa to make up for this deficiency of Kumada. The Examiner states that Hosokawa discloses capacitor

common drive circuit 34 (alleged common drive circuit) and row electrode drive 2 (alleged gate driver) opposite to each other with the display therebetween. See Office Action page 5 and Fig. 4 of Hosokawa. The Examiner further states that it would have been obvious to rearrange the components of Kumada with the teachings of Hosokawa because resistance is directly proportional to length of the wire and the wiring between electrical components can be shortened by making the alleged modification. See Office Action page 6.

Applicant submits that one skilled in the art would not modify or rearrange the components of Kumada because there is no reason or rationale in the prior art for making such a modification. Applicant also submits that the Examiner's reason for modifying Kumada does not establish a *prima facie* case of obviousness because the Examiner does not state which wiring is reduced by making the alleged modification to Kumada. The Examiner loosely states that some wiring is shortened but does not state which wiring is shortened.

Referring to FIG.8 of Hosokawa, the VCOM drive circuit has a flip-flop circuit in each row. Therefore, it is difficult to make the frame narrower in Hosokawa, because the configuration of such circuits is complex and the circuits are large in size. Even if the art of Hosokawa is combined with that of Kumada, the size of the transistors in the present invention can be reduced more than the transistors disclosed in Hosokawa and Kumada as described at least at paragraphs 41 and 49 of the specification. Therefore, the frame in the present invention can be made narrower than that in Hosokawa and Kumada.

Therefore, Applicant submits that claims 2 and 16 are patentable over Kumada because Kumada and Hosokawa cannot be combined and their combination is not obvious.

Dependent Claim 17

Claim 17 is patentable at least for reasons discussed above with respect to claim 1. Claim 17 is also patentable at least by virtue of its dependency.

Dependent Claims 4 and 19

Claims 4 and 19 are patentable at least by virtue of their dependency.

Dependent Claims 5 and 20

Kumada does not teach or even suggest that the voltages used in the common drive circuit correspond to the voltages of the gate driver circuit. On the other hand, it is described at least at paragraph 46 of the specification that since the voltage signal COMD applied to the common drive circuit uses the voltage level applied by the gate driver circuit, it is no longer necessary to newly prepare a voltage level for the common drive circuit.

Therefore, Applicant requests the Examiner to withdraw the rejection of claims 5 and 20.

Dependent Claims 6 and 21

Claims 6 and 21 recite that the first and second transistors of claim 3 are comprised of thin-film transistors. The Examiner contends that Kumada teaches the features of claims 6 and 21.

Applicant respectfully traverses the rejection. Kumada shows that the transistor 6 in Fig. 2 is a thin-film transistor (See Fig. 2 and [0044]). Kumada also states the TFT (thin-film transistor) 6 is in the liquid crystal panel 1 (See Fig. 2 and [0044]). The transistors shown in Fig. 3 in Kumada are not disclosed as thin-film transistors, as claimed by the Examiner. This is because Fig. 3 in Kumada is a construction of a circuit within a common electrode signal generator 10 (See [0049]). As seen from Fig. 2 in Kumada, the common electrode signal generator 10 is different from the liquid crystal panel 1. Therefore, the transistors of Fig. 3 in

Kumada are not disclosed as comprising of thin-film transistors as they are not part of the liquid crystal panel 1.

Therefore, Applicant submits that claims 6 and 21 are patentably distinguishable from the prior art. The Examiner is requested to reconsider the patentability of claims 6 and 21.

The remaining dependent claims are patentable at least by virtue of their dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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